

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, listing, of claims in the specification.

LISTING OF CLAIMS:

Claim 1 (original) A bit allocation method for use with video sequences, the method comprising:

receiving a clip bit budget for at least a first clip;

determining a scene quantity for the first clip;

determining a quantity of predicted frames in a first scene in the first clip; and

calculating a bit budget for the first scene based at least in part on the scene quantity for the first clip, the first clip bit budget, a quantity of intracoded frames in the first scene, and the quantity of predicted frames in the first scene.

Claim 2 (original) The bit allocation method as defined in Claim 1, wherein each scene in the first clip begins with an intracoded frame.

Claim 3 (original) The bit allocation method as defined in Claim 1, wherein the bit budget is calculated based at least in part by multiplying the clip bit budget

by a sum of the number of predicted frames and a first constant, and dividing by a sum of the quantity of intracoded and predicted frames in the clip and the number of clip scenes multiplied by a second constant.

Claim 4 (original) The bit allocation method as defined in Claim 1, wherein the first scene is a GOV.

Claim 5 (original) The bit allocation method as defined in Claim 1, wherein the first scene is a GOP.

Claim 6 (original) The bit allocation method as defined in Claim 1, wherein the predicted frames are P-VOPs.

Claim 7 (original) The bit allocation method as defined in Claim 1, further comprising adjusting a quantization parameter for a first predicted frame in the first scene based on the bit budget for the first scene and current bit usage.

Claim 8 (original) The bit allocation method as defined in Claim 7, wherein the adjustment of the quantization parameter is limited to a first range.

Claim 9 (original) The bit allocation method as defined in Claim 1, further comprising adjusting a quantization parameter for a first predicted frame in the first scene upwards at least partly in response to determining that current bit usage is greater than a value related to the bit budget for the first scene.

Claim 10 (original) The bit allocation method as defined in Claim 1, further comprising adjusting a quantization parameter for a first predicted frame in the first scene downwards at least partly in response to determining that current bit usage is less than a value related to the bit budget for the first scene.

Claim 11 (original) The bit allocation method as defined in Claim 1, further comprising adjusting a quantization parameter for a macroblock based at least in part on a channel rate.

Claim 12 (original) A bit allocation method for use with video clip scenes, the method comprising:

calculating a bit budget for a first scene;

calculating bit budgets for corresponding frames, including at least a first frame, within the first scene; and

calculating bits budgets corresponding to macroblocks within the first frame.

Claim 13 (original) The bit allocation method as defined in Claim 12,  
wherein the first scene is a GOP.

Claim 14 (original) The bit allocation method as defined in Claim 12,  
wherein the first scene is a GOV.

Claim 15 (original) The bit allocation method as defined in Claim 12,  
wherein the bit budget for the first scene is based at least in part on a complexity  
determination for the first scene.

Claim 16 (original) The bit allocation method as defined in Claim 12,  
wherein the bit budget for the first scene is based at least in part on a complexity  
determination for the first scene and an average complexity of a plurality of  
scenes.

Claim 17 (original) The bit allocation method as defined in claim 12,  
wherein the bit budget for the first scene is based at least in part on a buffer status.

Claim 18 (original) The bit allocation method as defined in Claim 12, wherein the bit budget for the first frame is based on quantization parameter-invariant criteria.

Claim 19 (original) The bit allocation method as defined in Claim 12, wherein the bit budget for the first frame is based at least in part on how many texture bits are in the first frame and how many motion vector bits there are for the first frame.

Claim 20 (original) The bit allocation method as defined in Claim 19, wherein the bit budget for the first frame is further based on a mean absolute difference value corresponding to the first frame relative to a second frame.

Claim 21 (original) The bit allocation method as defined in Claim 12, wherein the bit budget for the first frame is based at least in part on the bit budget for the first scene, a quantity of bits used for already coded frames in the first scene, a complexity of the first scene, and complexities of already coded frames in the first scene.

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Claim 22 (original) The bit allocation method as defined in claim 12, wherein all the macroblocks within the first frame are quantized using one quantization parameter value.

Claim 23 (original) The bit allocation method as defined in Claim 12, wherein a quantization parameter is varied for the first frame macroblocks based at least in part on current bit usage and budgeted bit usage.

Claims 24-34 (canceled).